

KERAMIC STUDIO

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We feel particularly proud of the supplement which accompanies this issue of *KERAMIC STUDIO*. It was produced especially to illustrate the article on color by Mr. Hugo Froehlich, and is an unusually good reproduction, although no mechanical process can *exactly* reproduce a painting. To those who are serious students of design, this supplement

will be invaluable. At the same time we realise that those of our readers who prefer naturalistic painting to design, will not be able to appreciate the worth of this study and to them we would say that we have ready and in preparation, more good naturalistic studies than we have issued for some time. As an earnest of this we announce for September supplement a fine study of Pansies by E. Louise Jenkins; for October "Dawn," an original figure study, beautiful in color, by Miss Harriette Strafer and in November four dainty panels of little grapes by Sara Wood Safford.

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We remind the students of design that the next issue will contain the Class Room criticism on design based on the "Jack-in-the-Pulpit" motif. All who wish to submit designs for criticism on this problem, must send in their work by the fifth of July. Those wishing to submit designs based on the Dandelion for the following Class Room criticism must send them in by the 15th of July. The Narcissus problem which follows must be sent in by the 15th of August.

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A recent addition to our study table is a copy of the new edition of the old "standby," Miss Louise McLaughlin's Manual of China Painting, issued by the Robert Clarke Company of Cincinnati, Ohio.

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We also have received from the English firm of Longmans, Green & Co., a text book of ceramic calculation which should be of great value to potters, the only other book of this nature with which we are acquainted being the Manual of Ceramic Calculation issued by the American Ceramic Society for its members.

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THE first meeting of the new Advisory Board was held in Chicago, Saturday, May 28th. This was as "immediately after election" as possible, the election having taken place in New York City and the Board meeting in Chicago.

Not yet having recourse to the minutes, reports, stationery

etc., some items were left for the June meeting. All efforts of the Board regarding the study course are to be directed along the lines chosen by our predecessors who have given serious thought and untiring labor to its formative period.

An important matter of business was transacted,— the reelection of Miss Mary Chase Perry, as chairman of the committee of education. An enthusiastic vote of thanks was accorded her, for previous work, proving entire satisfaction with her methods and manifesting a desire to continue the best possible course of study for members of the League.

Let us acknowledge our appreciation by taking hold with the undaunted American spirit that wins.

BELLE BARNETT VESEY,
President.

Chicago, June 1, 1904.

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PRINCIPLES OF DESIGN—COLOR

Hugo Froehlich

THE color supplement this month shows us some of the sources from which artists draw color inspiration. Various attempts at scientific solutions of good color have been made at different times, and while these have been material aids up to a certain point, yet the emotions trained by experience will always be the first and most infallible judges of fine color. The quantity of color, the intensity or grayness, its tint or shade, its position, its shape, its technique are so many factors in any color arrangement that can be solved by scientific formulas, just as any musical composition or any poem depends on structural formulas. If these formulas or methods can be mastered so completely that they become sub-conscious and allow the emotions to have full sway, we have possible conditions for good work. The emotional judgment and not the method is the criterion, because the method alone in the hands of the tyro, even when it is fully comprehended, results in mechanical work which lacks all fire of inspiration.

When an artist picks up a pebble and finds a color scheme that plays color music to his eye, he never attributes that pleasure to a scientific formula. It may be reduced to such, and thus give an added satisfaction, but the emotional pleasure is first, and is dominant. In painting a grey day, for instance, we feel the charm of the subtle differences of the greys and their technique, but only on analysis do we find that dominant harmony is one of the causes which, as the term indicates, is a bringing of all colors into closer relation or harmony, by making one color dominate all. For instance if the sky is blue, the distance violet, and the foreground green, these may be brought into closer relation by mixing a warm or cool grey, the dominant note of the grey day, with the sky, distance and foreground, thus making an enveloping color. In some early morning effects, a grey greenish yellow dominates, while in some sunsets a red may be the enveloping color.

This method is largely followed by painters both of the past and present. Rembrandt's "Night Watch" seems so bathed in gold that the armor and black velvets seem to give out a subdued golden glow. Van Dyke, Velasquez, Titian, Tintoretto, Veronese, and many others worked in this way. This same method is successfully employed by designers as

well, and always has the effect of bringing harsh colors into harmonious relation.

Interior decorators find it difficult to bring the disagreeable yellow of the wood trimmings of the modern house to any terms with the wall paper, carpet, and furniture, unless they frankly stain it a color that will harmonize with the rest of the scheme, which is usually controlled by some dominating or key color. Custom and conservatism have fastened on us this hideous yellow varnished wood trimming, and only the trained eye refuses to tolerate it. Weathered and fumed oak are protests against this garish yellow finish.

In much of the ceramic work the poor color is due to the use of colors that have not been sufficiently related. It is true, however, that quantity, position, shape and technique have much to do with the success or failure of a color scheme, because if any one color area is too large or too small for the quantities of the others, the balance of the design is destroyed, even though the scheme may be a dominant harmony. So again, if the position is such as to attract undue attention, the balance of the design is destroyed. Or the quantity and position of a color area may be right, but if its shape does not harmonize with the neighboring shapes, it will destroy the balance. Lastly, the technique may be too vigorous or too tame, it may be too brutal or too insipid, and thus throw out of balance the other qualifications.

We must often turn reverently to the past for our instruction, and we find a most magnificent use of color in the paintings and fabrics of the Middle Ages. The simple colors then at the disposal of the painter seemed no hardship, and their canvases are the very essence of fine color. To these treasures, frequent pilgrimages are made by art lovers and painters of the present, who make copies that they may come in direct touch with the method of producing fine color. This not only adds to their stock of knowledge, but stimulates their color sense and gives them the power to express some of that color in their own work. But these treasures are not within the reach of many, and it becomes necessary to go to sources nearer the worker. Even the textiles of the golden period of Sicily, Spain, Florence and Venice are rare, and nothing but bits of rags of this splendid time are left. At handsome prices, these have been collected by art lovers, so that the painter of the present can consult these records in museums and private collections, but may not hope to possess them.

Even Japanese and Chinese prints are scarce and are growing more so every year. These prints are little songs of line, mass and color, that sing their quaintly beautiful melody to the eye, and influence the art standards wherever they go. Unfortunately, however, anything with the Chinese or Japanese stamp upon it is considered by the uninitiated public as standard, and this uncritical attitude has resulted in a flood of most decadent Chinese and Japanese wares, which is sweeping the country, and is to a large extent counter-balancing the good accomplished by the fine things done by these people. Training to see and know, alone can correct this decadence.

Some of the earlier Indian pottery is splendid in its color scheme, and is especially helpful to the art craftsman. The Sikyatki bowl on the supplement page has suffered some in reproduction, but even in this print we see what good color relations are expressed, how fine the structural lines, how splendid the balance of the simple masses.

Old oriental rugs, bronzes, pottery and porcelains are further sources for color suggestions and are within the reach of students.

We find the artist's studio interesting because a trained mind has brought together many art objects and so arranged them that the atmosphere of the atelier is an expression of

the artist's life. It is as much a creation of his mind as his canvases are, and it is as necessary to him as the violin is to the violinist.

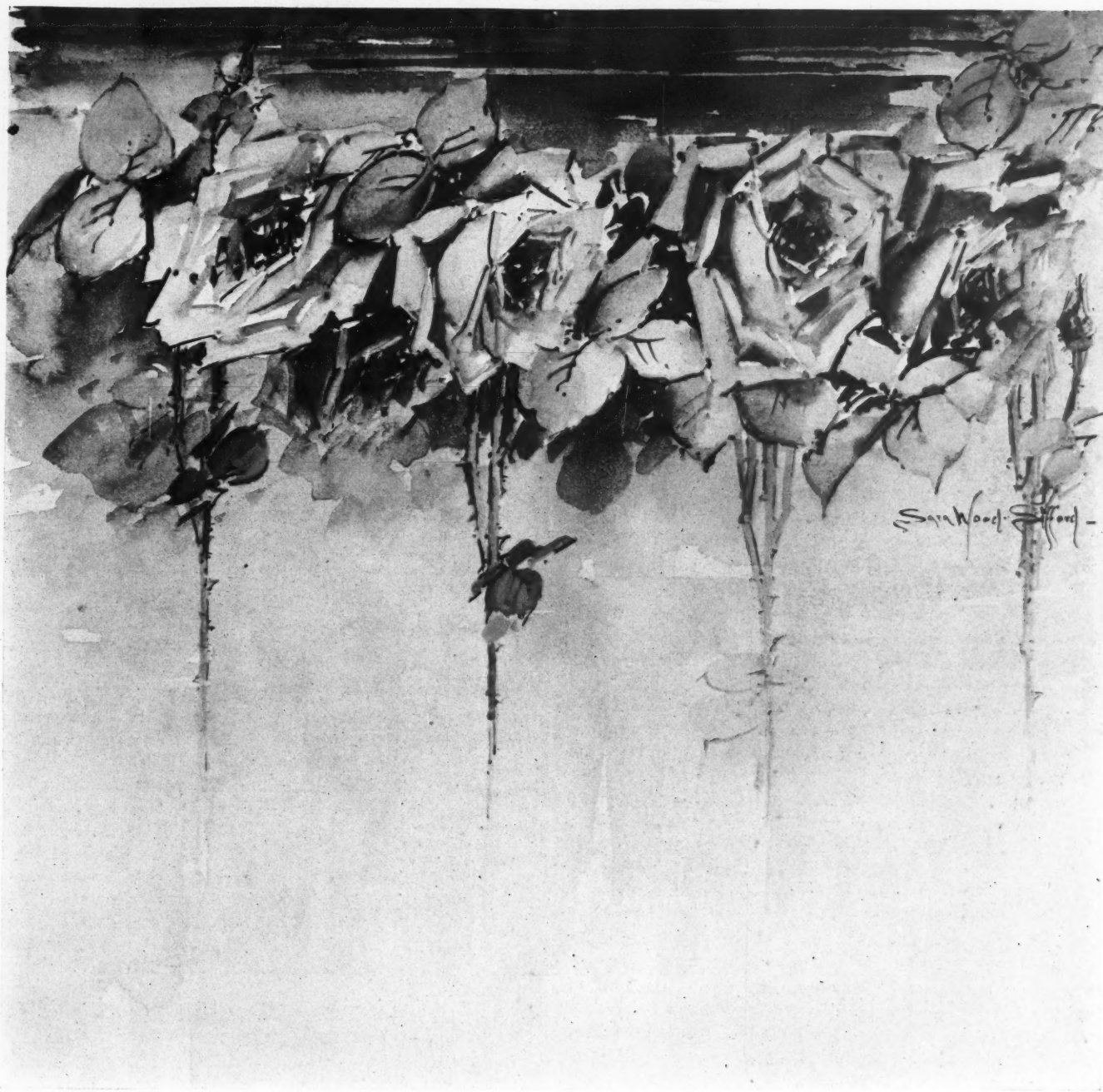
One more source of color inspiration that lies at our very doors is in Nature's treasure-house. In autumn she gives us infinite variety in the sedges, grasses, and leaves. At any time of the year, indeed, we can make color demands on her, and find helpful response. Lichens, mosses, pebbles, the bark of trees, the very color of a mud bank all give us color schemes, provided our eyes have been opened to this kind of beauty. Birds, animals and insects, as well as atmospheric conditions and times of day, are further aids.

The increased appreciation of color that comes from a study of these various sources is inestimable, as any attempt to copy them gives us the method and control of material. If we should try by the use of water color to get some particular shade of green found in a Japanese print, we would learn by this effort the number of colors required, the quantity, quality and limitations of each color. Our color chart is a further aid in naming and locating this color, so that its subsequent occurrence in a line design would recall the original color.

Fleeting impressions, such as storm, sea, atmospheric, twilight and moonlight effects are noted by making small, rapid outlines of the scenes, and writing, in the various shapes of sky, ground and water, the name of the color in its abbreviated terms.

These, in a general way, are the sources from which we derive our color knowledge, and this once acquired, we think in its technical terms. This is illustrated in the maple leaf and its color application in the vase opposite, in the Sikyatki bowl and its application in the accompanying stencil, and in the Venetian textile and its application in the decorative landscape. Many artists collect these materials, making careful copies in a sketch-book for future reference. To the ceramic worker, especially to the over-glaze painter, this method must be of the greatest value. All art growth is slow, and the rank and file of ceramists will continue to multiply realistic landscapes and figures, and sprigs of flowers on vases, plates, cups and saucers. Nor is this to be too much lamented, for while we must work toward a better art, the development must come through a gradual change, rather than by a violent revolution. A saucer with a sprinkling of violets that vie with nature in realism is more beautiful to the majority of people than the same saucer without any decoration. This is inevitable, because it is but one step in the evolution of art, just as the overloaded realistic pyrography designs are a similar step. But because people enjoy this kind of art we ought not to close our eyes to the art that has lived for centuries, and will continue to live for many more. Because we enjoy the popular tunes whistled on the street, we must not forget that Beethoven and Wagner produced works that will fill the world with their grandeur long after the popular tune has been forgotten. Realistic flower representations decoratively used and popular tunes will always be with us; they have their legitimate places and are stepping stones upward to something better. Let us, therefore, study that something better,—the really fine thing—and learn to appreciate it, even if we cannot hope to attain it. Let us get at the causes that have made splendid art possible, and try to apply these causes to our violets. The leaders in ceramics are doing this, and are making wonderful strides in bringing china painting up to the dignity of good work. By and by, others will join these leaders, and their art will not be confined to ceramics only, but to the great, real, every day world about us.

This is the art that we should keep in mind; the art that brings beauty in touch with life at every point.



ROSES—SARA WOOD SAFFORD

FOR roses arranged to mass around the top of a vase thus making a border, with stems and leaves falling below, I would suggest that the roses be done in soft cream and white—a background of grey, deep at the top and shading to a light soft tint toward the base. Use Shading Green and Royal Purple (or Violet) in tone at the top applying quite thickly, use same colors in the lighter tints—tint mixture very thinly in brush till you have a pleasing grey green tone.

In a second fire the same colors may be used at the top and Pearl Grey softly blended over the entire lower surface of vase. In a third and fourth fire, flush the *entire* vase with same Pearl Grey. Be careful to keep some of the soft lights upon the roses, but do not forget the harmony of greys.

Use Violet and Yellow for grey shadows in rose petals,—add a touch of Dark Green in deeper shadows, Albert Yellow in

the main hearts, a touch of Yellow Brown in deeper centers. Keep the leaves in grey greens, using the Violet shades with the light as well as darker greens.

For the small roses to be used loosely in decoration, I would suggest that one color tone be held in mind—a soft cream and grey scheme as suggested above. If pink roses are desired, have shades of pink and not a mass of pink, yellow, red and white.

A very pretty scheme in pink could be kept if the lightest roses were the most delicate “blush rose” tint, some of the petals being left creamy white, the second color being a deeper rose; use Rose pure in the center; Rose and Yellow (thin) in outer petals. The third tone, the deepest note, hold with Rose and Ruby in the heart and the same colors thinly applied for lighter petals. Keep leaves in soft grey greens.



ROSES—SARA WOOD SAFFORD

GRAND FEU CERAMICS

XII—GRAND FEU COLORS—Colored Pastes—Pâtes sur Pâtes

Taxile Doat



have now reached the most interesting part of the grand feu art, the colors. Whether a painter, a sculptor or an architect, the ceramic artist must also be a chemist. He may produce the finest models of sculpture or the most beautiful decoration, he may fire in the most even and experienced manner, but he will not succeed if he has not at

his service a palette of colors which suits his work. But the palette of the grand feu is not like that of the petit feu; for the latter, one may go to any of the merchants who are numerous in Paris, Berlin, and New York, and secure a rich palette which will compete with the finest tones of oil painting. For the grand feu, each ceramist must mix his own colors or have them experimented on by a chemist who makes a specialty of such work. These chemists are rare and the additional expense of such collaboration is possible only to large manufactories. The researches are costly and are naturally kept secret by the establishments for which they are a source of profit.

The isolated artist, not having any help of this kind, must be his own chemist. If he is fond of research he will certainly succeed, and the whole of his work will gain therefrom harmony and homogeneity.

His work will be simplified by the publications of such men as Brongniart, Ebelman and Salvétat, who in France are authorities.* He will find in these books information which will constitute his starting point and a number of acquired results which he may modify to suit his fancy. He will also be helped by catalogues of chemical products which large firms everywhere offer to the public, wherein the metals, acids and salts constitute a rich mine for varied experiments. These products are offered in a state of the greatest possible purity by reliable industrial firms.

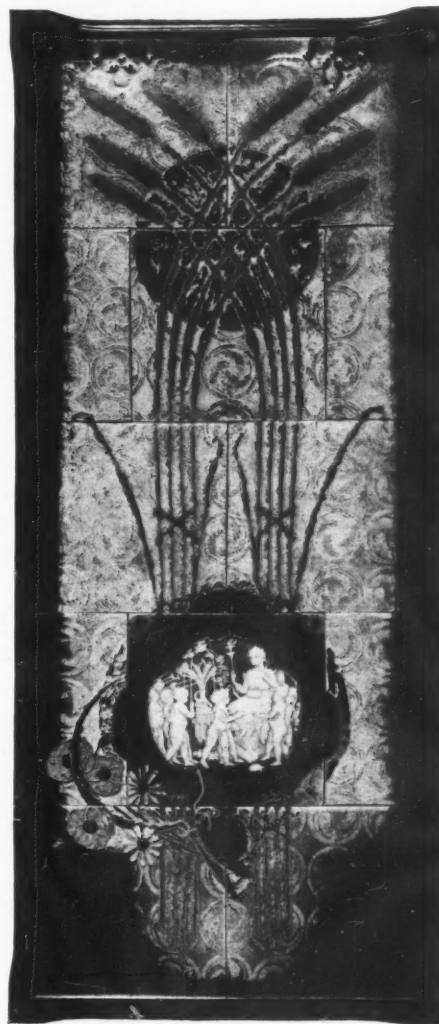
In these articles I have carefully avoided the science of abstract formulae, but on the contrary have adopted the science of immediate and empirical application, which the humblest ceramist will be able to understand. The given data will be certain, the mixtures simple and producing *on the same material* constant effects, according to the firing for which they have been created, but these effects will vary with the body used.

Of course I will leave out every thing which relates to low muffle firings. These are known everywhere, and nothing will be found in them which could be of any use for grand feu ceramics. They are consequently of no interest here, which does not mean that I wish to bring into disrepute an art which has shone with great brilliancy and has given birth to many beautiful works, which fill the museums and belong to the history of ceramics. I only mean that these muffle firings having been a step in the evolution toward grand feu ceramics have no *raison d'être* now that the latter have been created, but are repetitions and contrary to the law of progress, which is characterised by a march forward. This forward march opens in ceramics unsuspected horizons, more in harmony with the strenuous fight of mind against matter, and more fascinating in their results. I do not want a better proof of this than the splendid blossoming of grand feu works which has taken place in the last fifteen years, and the favor with which

both public and collectors have met this production with its new and surprising effects. Whatever the number of discoveries made during that time, almost every thing still remains to be conquered, and the field cannot be harvested so that newcomers will not find much to glean.

I have told in a former article how the grand feu palette was developed at Sèvres, and I will now say what this palette is and what a rich field it covers.

The number of grand feu colors and glazes is limited, because few coloring substances can resist the high temperature for firing hard porcelain and grès. Metals only can supply them. However, as there are 49 known metals with the whole series of their binary and tertiary compounds, the field of exploration remains fruitful. The first combinations were



Panel in kaolinic grès, by Taxile Doat, purchased by the French Government for the Musée du Luxembourg.

Subject of medallion, Ceres; white pâte sur pâte on lapis-lazuli blue ground. Lambrequin, mat light green with scattered wheat heads in yellow bright glaze. Cartouche, mat crystalline dark brown with red poppies, white daisies and the sickle in golden yellow. The wheat stems, which cross each other on a disc of bright glaze, are yellow with snowy white on edges.

made by adding the coloring oxides to a porcelain paste mixed with water. The first attempt was made with chrome, the second with cobalt.

Cobalt and its compounds give blue colors. This metal is employed, either as a chemically pure oxide, or in the form of arseniate, carbonate and even phosphate. Variations of tones can be obtained by adding to it colorless oxides, like zinc and

*In the United States "Seger's Collected Writings," recently translated into English, will be found a most invaluable help.—Ed.

aluminum, or by increasing its penetrating power by the addition of nickel.

Chrome is the basis of greens, from light green or celadon to the dark malachite green. It can be modified by the addition of cobalt and aluminum. Combined with other materials it gives a wide series of tones. Thus pink is a combination of chrome, zinc and aluminum. Combined with lead, it gives yellow; with iron, brown.

Nickel which has a great affinity for cobalt, is almost always found close to it in nature. The brown palette comes from this metal which possesses the greatest power for penetrating vitrified matter.

Copper, a marvelous metal, runs, during firing, through the whole gamut of the most opposite tones. According to the atmosphere in which it is developed, it gives black, green, turquoise blue and scarlet red. It becomes metal, flows, is translucent or opaque, according to the materials with which it is mixed. And if it is the most difficult metal to control, it is also the good fairy of ceramists because of the charm of its unexpected effects.

Iron, so common in nature, is used in all its forms, *colcothar*, *battitures*, *bol d'Armenie*, *Terre de Sienne*, yellow or red ochre, ferruginous silicate of Thiviers, etc. It is the basis for browns, reds and violets. It is both a source of trouble and a providence to ceramists, troublesome because it gets incrustated in the white, and providential because of the variety of tones which it gives to other metals.

Uranium is, like copper, among the erratic metals. It gives both yellows and blacks, going from citron yellow to yellow brown, and from grey to deep black.

Manganese, either common or ferruginous, and pure metallic manganese may enter into coloring combinations. They produce brownish black, violet, reddish brown and yellow. In most cases this coloring gives metallic reflections.

Iridium gives greyish blacks of a great delicacy and of great charm.

Platinum gives to the flux of the body and the vitreous glaze only a lead grey color half-way between the color of silver and that of tin, but it is the only metal which gives fixed tones which vary neither in oxidising nor reducing fires.

The two precious metals, gold (1030°C) and silver (770°C), which melt at comparatively low temperatures, disappear in porcelain firing.

The metals which I have just mentioned are those which have already been used by ceramists as coloring agents, but their combinations are far from being exhausted. And other metals are just beginning to be experimented on. Molybdenum, ruthenium, titanium, vanadium which have a great future, will tempt bold experimenters.

Metallic oxides and their compounds act differently according to the nature of the atmosphere in the kiln. They must be studied for the kind of firing in which they will be used. So uranium gives black in reducing, yellow in oxidising. Copper, green in oxidising, is red in reducing. From this fact it will be seen that the scientific regulation of the kiln atmospheres has doubled the coloring resources. But certain metals, zinc for instance, are volatilized and completely disappear in a reducing atmosphere.

Ceramists who use only one or two metals have not any mistakes to fear, but those who want a varied palette must carefully label their colors, in order to avoid disappointments such as I had one day when I accidentally used a celadon of copper glaze instead of a celadon of iron. The vase, when passing through a reducing atmosphere, became of a blackish red which concealed all the decoration. This was due to the

fact that oxidised or desoxidised gases, according to the atmosphere, favor by affinity the development of one of the metals which enter into the composition.

Coloring oxides may be combined either with the paste or with the glaze. They give different effects with these different combinations.

When the color is mixed with the paste, it forms with it an opaque mass which remains fixed, is not displaced, and allows the superimposition of other pastes. This constitutes what is called *colored pastes*.

If the same coloring matter is added to the glaze, the latter becomes more fusible and acquires a tendency to flow, thus making it impossible to superimpose a decoration. This combination gives the *colored glazes*.

These two processes complete each other, as the colored glaze may safely flow over a paste decoration which remains fixed.

Colored pastes are not of a complex preparation. It is sufficient to add to the white paste a few grammes of coloring oxide and to mix with water.

The greens which I use in the shape of paste are prepared as follows by simple grinding:

<i>Light celadon.</i>		<i>Dark celadon.</i>	
Chrome oxide	2	Chrome oxide	5
PN white paste	98	PN white paste	95
	100		100

One may go up to 10% chrome. Although these two colors stand both firings, the light celadon is finer in oxidising, and the dark celadon in reducing.

If only a small quantity of paste is needed, the mixture can be made on a rough glass with a muller; and with water. For a quantity of more than one pound, a hand mill should be used. Chrome pastes have a remarkable distinction and delicacy, but have not a great power of infiltration through other pastes. In order to give more delicacy to their combinations, one may add to them from 3 to 5 grammes zinc oxide.

The blue pastes which I use are made as follows:

<i>Light blue—</i>	Cobalt oxide	2,50
	PN white paste	97,50
		100
<i>Medium blue—</i>	Cobalt oxide	4,00
	PN white paste	96,00
		100
<i>Very dark blue—</i>	Cobalt oxide	10,00
	PN white paste	90,00
		100

Cobalt has a very great coloring power, but must be ridden of the nickel which it contains and for which it has a great affinity. If on a cobaltiferous paste another colored paste, or simply a white paste, is laid, the latter will be penetrated by the cobalt oxide. This infiltration through a white paste laid over a cobaltiferous paste, has given birth to the process of decoration called *pate sur pate* or applied pastes.

Colored pastes must have the following qualities: such a degree of plasticity that they can securely be applied to the piece and make a whole with it; coefficient of expansion identical to that of the porcelain itself, so that creasing, blisters and cracks will be avoided. Besides they must be mixed as thoroughly as possible either by grinding or fritting, so that they will give uniform tones without spots or shading.

The mixture by grinding is very simple. It is done with a muller and a palette knife.

The mixture by fritting is more complex and requires practice. A *frit* is the product of the calcination or fusion of

many substances, so that they will be intimately mixed and incorporated with each other. It is made in a fire clay crucible. This crucible, containing the substances to be fritted, is placed in the hottest part of the kiln, where it passes through the different temperatures of the firing and undergoes a partial or complete fusion. If there has been only calcination, the crucible, when taken out of the kiln, is simply emptied, and the calcined product mixed in the mill. But if the materials have fused, they are stuck to the crucible, which must be broken, to allow the gathering of all the vitrified substance which then will be crushed and ground, and will be used in the shape of impalpable flour. It is in the upper part of my kiln that I place the crucibles. If the mixture is liable to overflow, an old bat should be placed under the crucible to protect the placing material. My crucibles are made of placing material (Provins clay and grog) and have the shape of Fig. A, with a spout. I



Fig. A.

buy them from Mr. Pollard, rue du Poteau No. 59, Paris. The most useful are about 8 inches high and 4 inches in diameter.*

Dark blue paste is obtained by thoroughly mixing in the crucible and fusing moderately the following materials:

	Fontainebleau sand	54
<i>Frit</i>	Pure and very white clayey kaolin	45
	Cobalt oxide free from nickel	11

This frit crushed and ground is mixed with the paste in the following proportion:

	Clayey kaolin	45
	PN white paste	71 both for oxidising and re-
<i>Frit</i>		57 ducing atmospheres.

A moderate fusion can be obtained by placing the crucible at the bottom of the kiln, a strong fusion by placing it on top, of course in a down draft kiln; inversely in an up draft kiln.

For some very weak frittings, I have made a hole in the bottom of the kiln. Protected by a depth of a foot the crucibles receive a very mild heat. As much as possible I avoid fritting, but it must be admitted that it is the surest way to obtain a thorough incorporation of the coloring matter with the paste and their intimate mixture. Pastes which have not been fritted have a rough appearance and are sprinkled with spots, which are not shown on fritted pastes. The latter harmonize better with the precious porcelain material. For this reason fritting is to be recommended, but it is slow and expensive.

Blueish Green Paste

Strong fritting	Fontainebleau sand	30
	Pure clayey kaolin	22
	Chromate of cobalt	7

To be mixed by grinding in a hand mill, if no motive power is to be had.

Mixture	Clayey kaolin	43
	PN white paste	90 for oxidising firing.
	Frit	55

Green Paste

Very strong fritting	Fontainebleau sand	30
	Clayey kaolin	25
	Feldspar in flour	75
	Chrome oxide	20

Intimate mixture	Clayey kaolin	20
	PN white paste	85 for oxidising and reducing
	Frit	30 firings.

Mauve Paste

Simple mixture	Chrome aluminate	30
	Feldspar in flour	20 strictly oxidising firing.
	PN white paste	30

Black Paste

Strong fritting	Clayey kaolin	50
	Chromate of iron	15
	Cobalt oxide	6

Mixture	PN white paste	75
	Frit	30 for oxidising firing.

Grey of Platinum Paste

Simple mixture	Light grey.		Dark grey.	
	Platinum oxide	2	Platinum oxide	6
	PN white paste	98	PN white paste	94

for oxidising and reducing firings, very fine tone in oxidising.

In all these formulae, the PN body may of course be replaced by any other porcelain paste which will be adopted. But one must carefully avoid putting a color made with a certain paste over a paste of a different composition. It is better to use for these color mixtures, not the fresh porcelain paste, but the scraps of paste which are gathered on the wheel after throwing. They have the advantage of having been worked and being more plastic.

The pastes which I have mentioned do not suit grès, as its coefficient of expansion is different, besides they give on grès only neutral, grey tones. *They are exclusive to porcelain.*

Colored pastes are applied either on raw or baked pieces, quite thick, *in successive layers*, each layer being dried. They are applied either with the decorating brush or with a fine sponge when large surfaces must be covered. To lay the paste in one coat would be to surely produce crackles and blisters. It must be laid very carefully in the shape of very thin slip for the first coat, gradually thickened for the following coats. It is mixed in water without the addition of gum.

Over these pastes, which are not displaced in the firing, can be made, by a superimposition of white paste, the fine bas reliefs, which are called *pâtes sur pâtes*, and are known everywhere.

When the design has been traced over the colored paste, either with a pencil or a pouncer, it is covered with slip of white paste laid in successive coats and of different thicknesses according to the effects to be obtained. The water is absorbed by the raw body and the paste is gradually deposited. When the desired thickness is acquired, the paste, thoroughly dry, is modelled with an iron dented chisel such as is used for medal engraving. During the firing the coloring oxide of the under paste penetrates the white applied paste according to its coloring power and gives it in the thin parts a transparency which reminds one of the precious effects of cameo. Blue and green pastes possess the greatest penetrating power. For this reason bas reliefs executed over these pastes must be made thicker.

Colored pastes being opaque are naturally mat after firing. To give them the necessary brilliancy and glassy finish they must be covered with a glaze, which will preserve them from the injuries of time, and distinguish them from the bas reliefs made in Wedgwood style.

*The plumbago crucibles of the Dixon Graphite Co. are excellent.



TRUMPET FLOWER—K. E. CHERRY

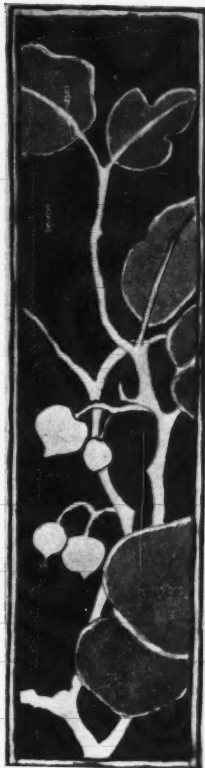
FIRST Fire—Flowers, Yellow Red, Blood Red for principal bunch; Yellow, Brown, Yellow Red, shade with Yellow Red and Brown Green.

Leaves, Shading Green and Violet, shade with shading and a little black.

Second Fire—Flowers, wash flowers with Yellow Red and Carnation; darkest touches with Blood Red and Auburn brown. Leaves, wash with Apple Green, dark touches, Moss Green and Black. Backgrounds, Yellow, Yellow Brown, Violet and Blood Red.



C. A. Pratt, N. Y. Class.



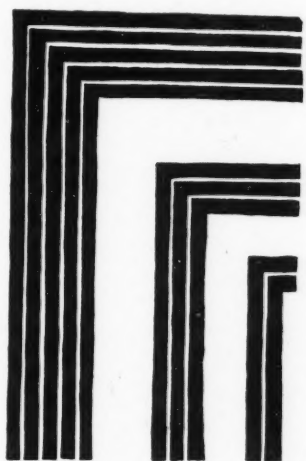
L. Tuttle, N. Y. Class.

CLASS IN CERAMIC DESIGN

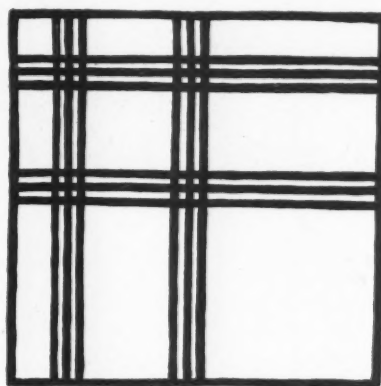
MARSHAL FRY, Instructor

THE Spring exhibit of the work of the class in ceramic design under Marshal Fry of New York, was one of the most interesting events of the season in the field of overglaze decoration.

The dignity given to the work by the absence of the commercial or sale element and the arrangement of the exhibit were points to be noticed. The studios were cleaned of everything except the work, no curios, draperies, or furniture detracted from the educational object of the exhibit, and the general effect was that of galleries devoted to an exhibition.



Elizabeth Libby, Bridgeport Class.



Mrs. J. A. Ten Eyck, Bridgeport Class.

In the smaller studio were shown the designs carried out on the china itself, shown on bare tables—the pieces in blues, greens, and greys were grouped on a fumed oak Stickley table, while the blue and grey plates were placed above on a plate rack of the same wood. The pieces in warmer color schemes were also grouped by themselves.

Every one seemed impressed by the demonstration of the evolution from first simple exercises in design to the complete work on porcelain. The large attendance and the pleasure and interest shown were a great note of encouragement in the new movement toward proper ceramic decoration and this was the more marked, coming from students who had long been accustomed to the naturalistic painting of china rather than the decorative treatment of objects.



Jessie Ivory, New York Class.

The entire wall spaces of the large studio were devoted to the result of the year's work in ceramic design on paper. This was arranged in the order in which it was done, beginning with the work of the first lessons, illustrating artistic division of space by straight and curved lines, flower and landscape lines,

The pitchers and bowls were the most unusual in color and design treatment. The pitcher by Mrs. Hanford was a most interesting conventionalization of the daisy or chrysanthemum motif and very successful in color. The pitcher was

laid with an allover ground of light olive brown, on this were painted the flower petals and a triangular line at the bottom in a reddish tone, the calyx an apple green, the balance of design in two tones of olive green.

Two bowls by Nora Foster were very nice in design and color; the tree design in green and blue on a green grey ground, a touch of warm light brown introduced in the trunks and the line below the grass line. The berry bowl was in warmer tones, the ground of border being a warm light brown on which were laid the berries in a reddish tone, the balance of design carried out in two tones of olive green.



Jessie Ivory, New York Class.



C. A. Pratt, New York Class.

Mrs. Marie Crilley Wilson, perhaps, shows the most versatility—the quaint little child's bowl was most attractive and the fact that the tree trunks grow in front of the house and the foliage behind, in no way detracts from the charming effect. The sky and grass were a light grey blue, the distant path and roof of house a grey green, the house and light wavy line below a light greenish grey, while the trees, the base and outlines completed the effect in a dark grey blue. The bowl with tree design was also very nice, the vase a light olive brown, the sky, bands and outlines in dull blue, the trees, dull green and the distance a grey brown. The pitcher design was perhaps a little too elaborated but was quaint and interesting, the light ground, a light olive brown, the tree trunks a violet grey,



Ophelia Foley, Correspondence Class.

leaves a warm green and oranges with a wash of reddish tone; this coloring was held together by outlines, base and handle of black.

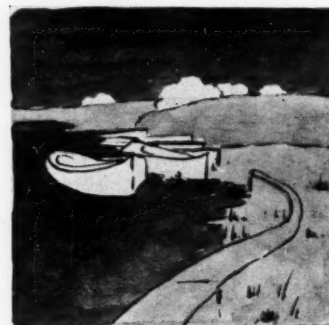
The amount of earnest work shown in this exhibit of the winter's work shows that an interest and a joy in the work itself has been aroused in the pupils—this is more than half the battle and we feel that Mr. Fry should be most encouraged in this new venture and other decorators also should feel the same inspiration, for this exhibit proves beyond a doubt that the work can not only be made to satisfy artistic taste, but may also be profitable in a financial way.



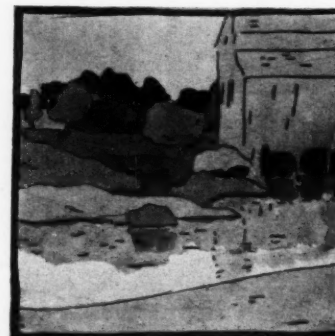
Mary Anderson, Correspondence Class.



Euphemia Wilmarth, New York Class.

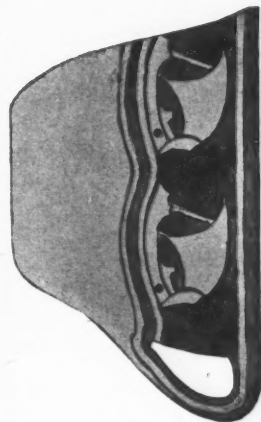
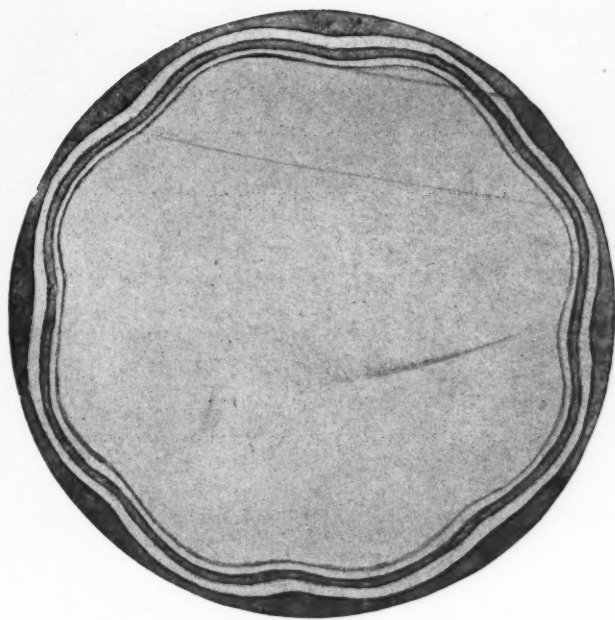


Jeannette Williams, Correspondence Class

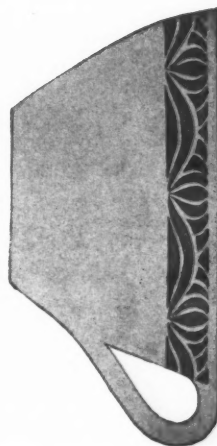
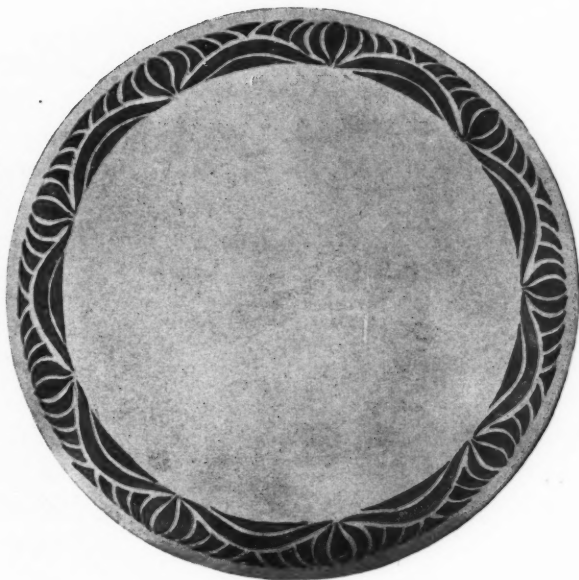


Minna Meinke, New York Class.

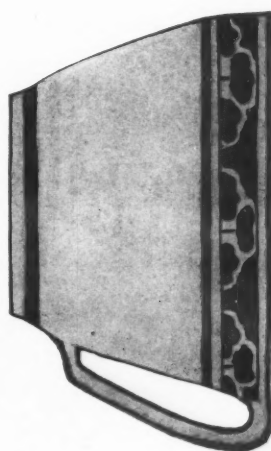
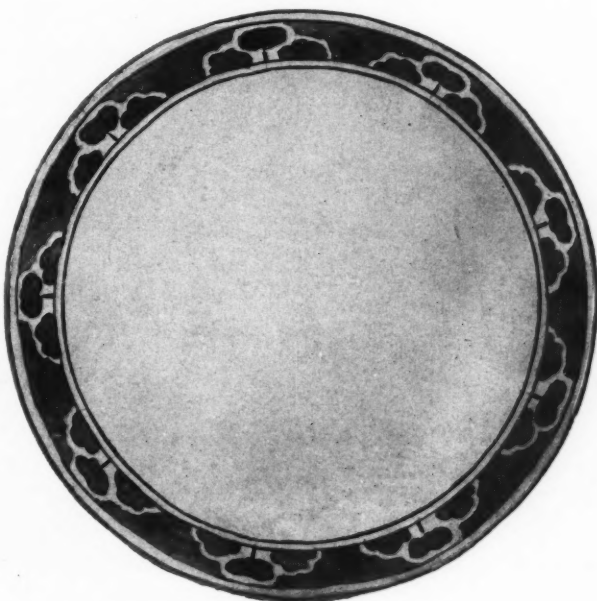
Maria Cullley Wilson, New York Class.

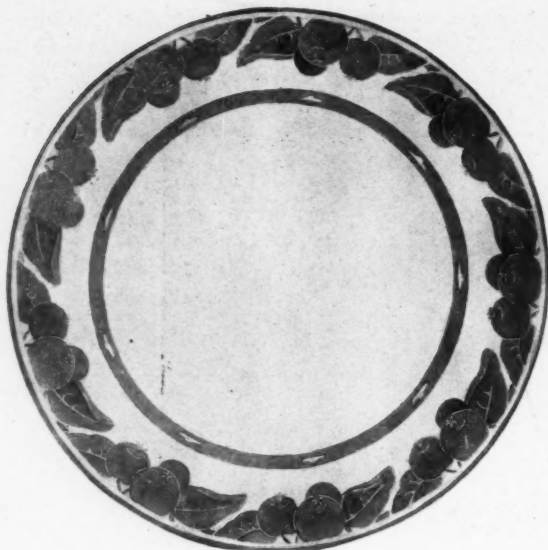


Mrs. Hanford, Bridgeport Class.

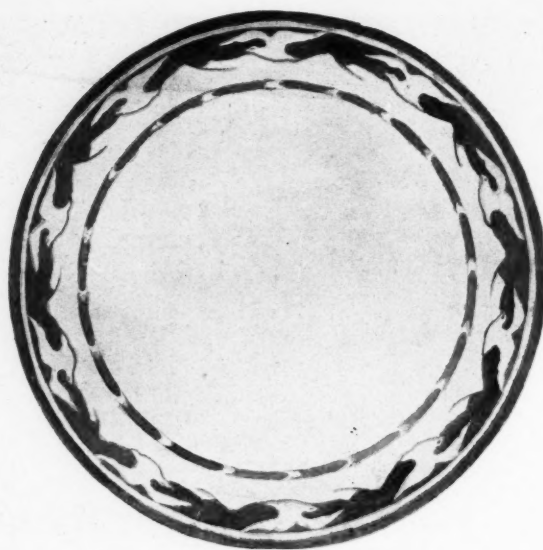


Harriet B. Hurd, Bridgeport Class.

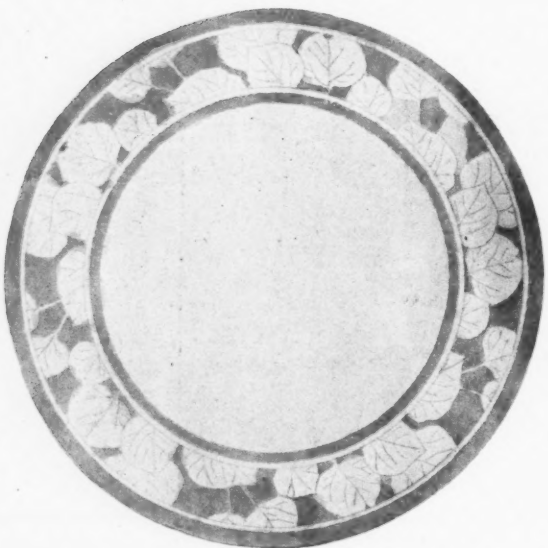




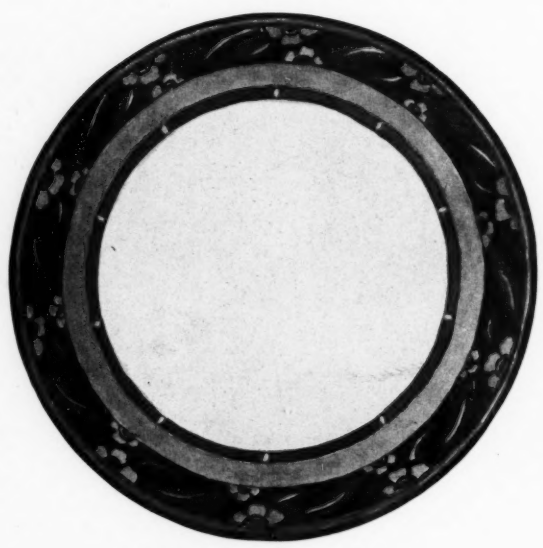
E. B. Wilmarth, New York Class.



E. Hesselmeier, Correspondence Class.



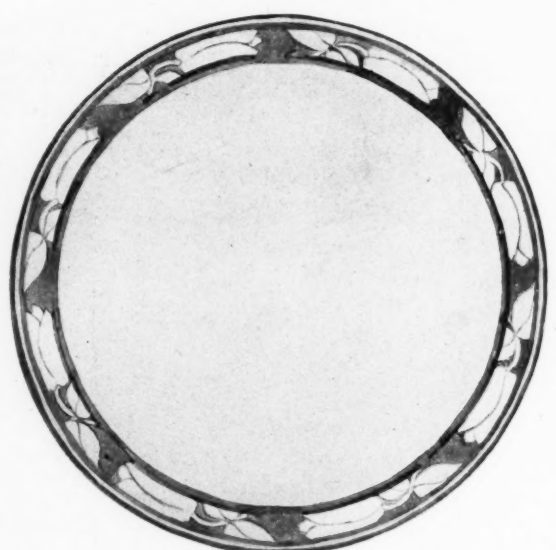
Elizabeth Libby, Bridgeport Class.



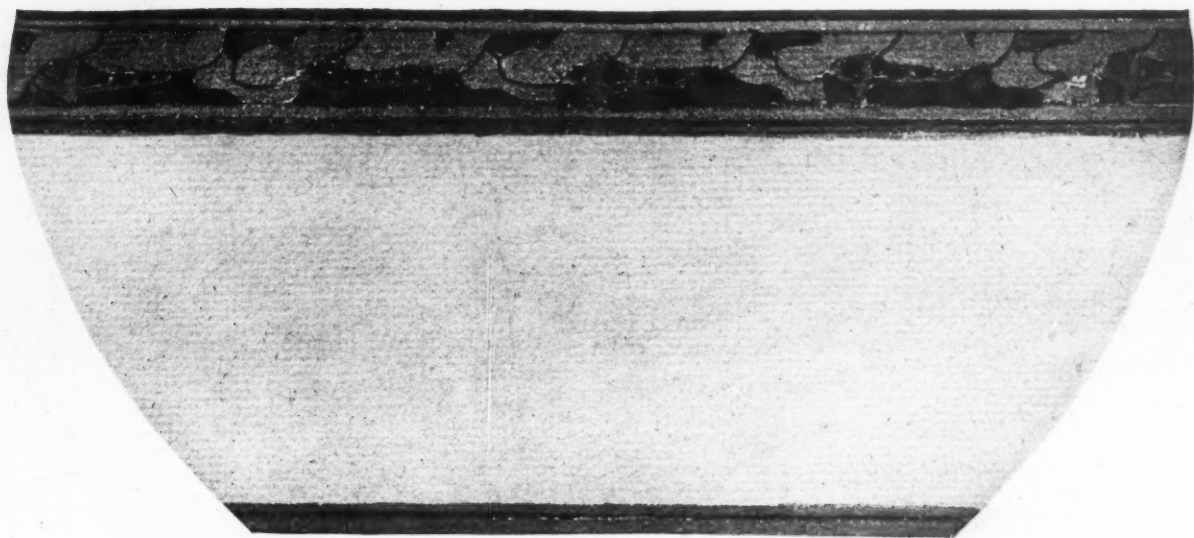
Anna B. Leonard, New York Class.



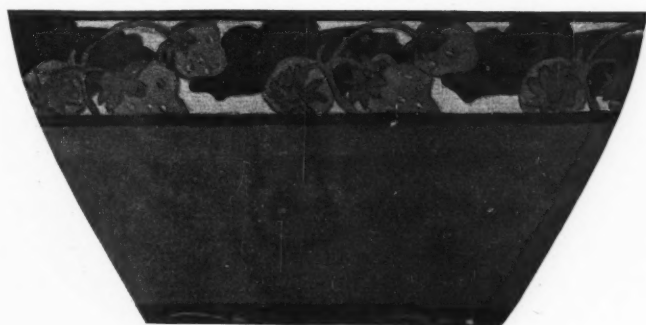
E. A. Methfessel, New York Class.



L. Knotts, New York Class.



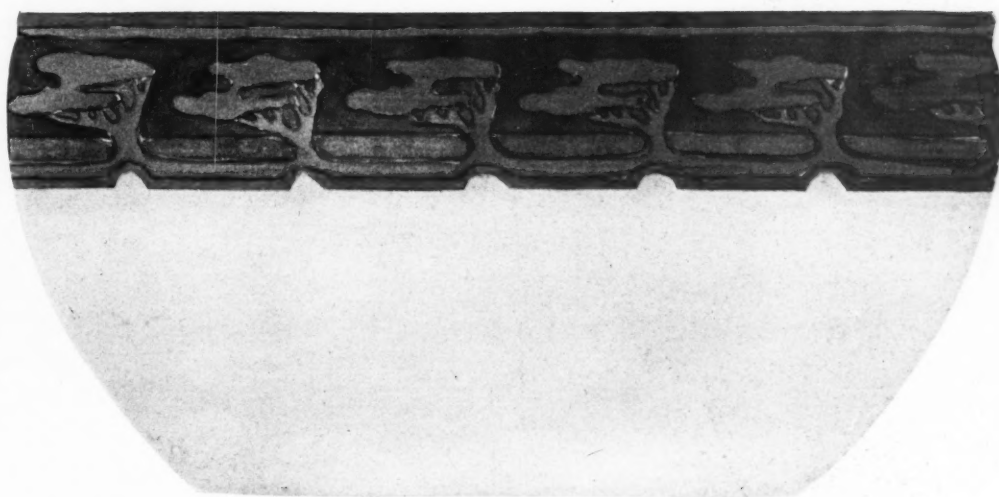
Nora L. Foster, New York Class.



Nora L. Foster, New York Class.



E. Kahl, New York Class.



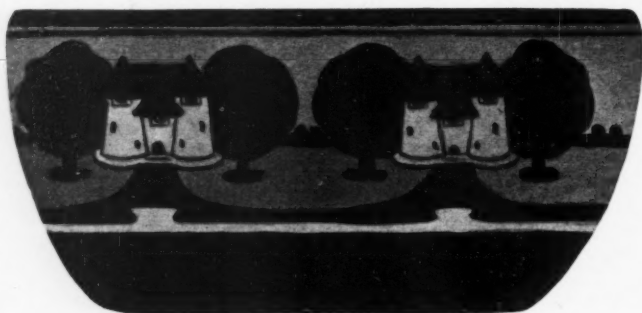
Marie Crilley Wilson, New York Class.



Mrs. Hanford, Bridgeport Class.



Marie Crilley Wilson, New York Class.



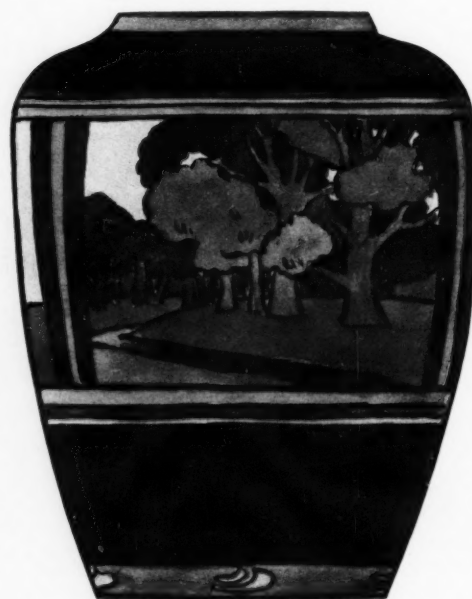
Marie Crilley Wilson, New York Class.



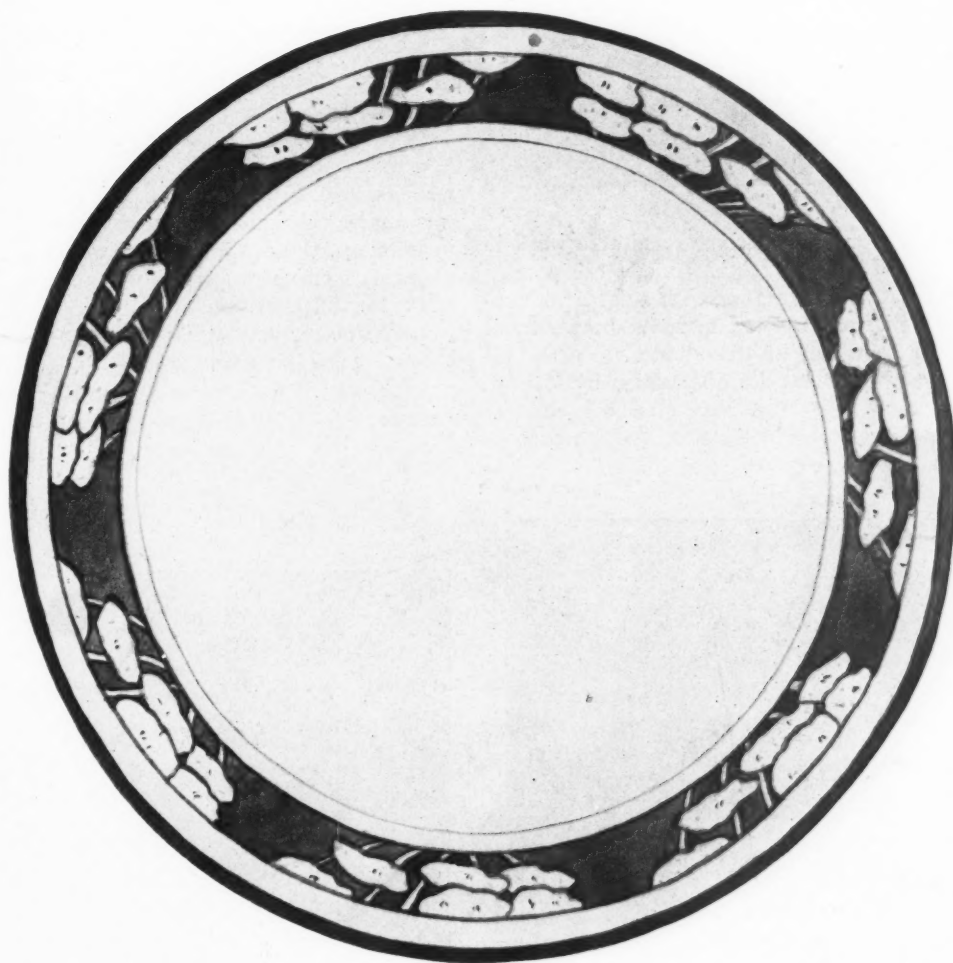
Euphemia Wilmarth, New York Class.



Minna Meinke, New York Class.



Mrs. Philip Holzer, Bridgeport Class.



Martha Beach, Bridgeport Class.

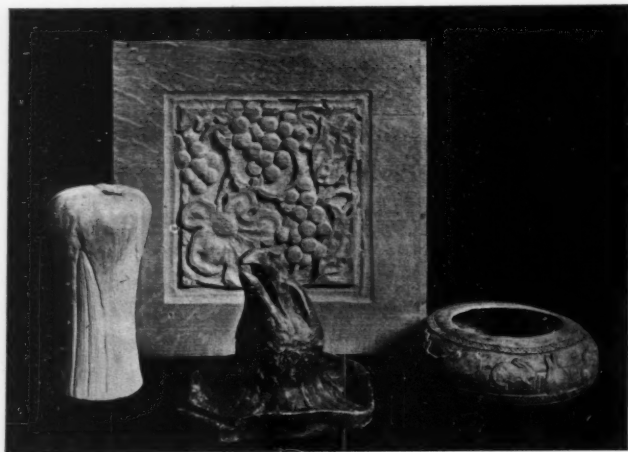


EXHIBITION NOTICE

AT the Young Women's Christian Association of East Fifteenth Street, New York, an exhibition of students' work from the art department was held in their studio for a week commencing May 18th.



Miss S. A. Walker's pupils had some creditable work in composition, pottery and wood carving. Among the pottery the low bowls were most attractive, one with a border of rabbits carved in low relief and colored in warm brown tones with a matt finish and another in green tones. Also a tobacco box with Moorish ornament and inscription by Miss M. B. Jones. The workers in this craft have made a good start and are getting some interesting color effects which promise well for much original work.



From the evening work a chest in quartered oak by Miss I. Foster was especially good in workmanship. It was carved in low relief with motives from the Volsunga Saga and stained just enough to bring out the fine grain in the wood.

The pupils of Miss Turner had some good work in water color, also in cast drawing and designs for wall paper.

A jury of artists awarded a first-year scholarship to Miss Agnes N. Lee, and honorable mention to Miss S. Udela Montague and Miss Pearl Squire; a second-year scholarship to Miss Elsie Newell and honorable mention to Miss M. B. Jones and Miss Grace Reynolds.

PRATT INSTITUTE

THE annual exhibition of students' work at Pratt Institute, Brooklyn, was held for three days beginning May 19th. The exhibition received much commendation from the many visitors and this was more appreciated owing to the fact that much of the strong work had been sent to the St. Louis Exposition and the exhibit at the Institute therefore could not represent the whole year's work.

The exhibits were well arranged and carefully planned, giving a very clear idea of the character of the various courses.

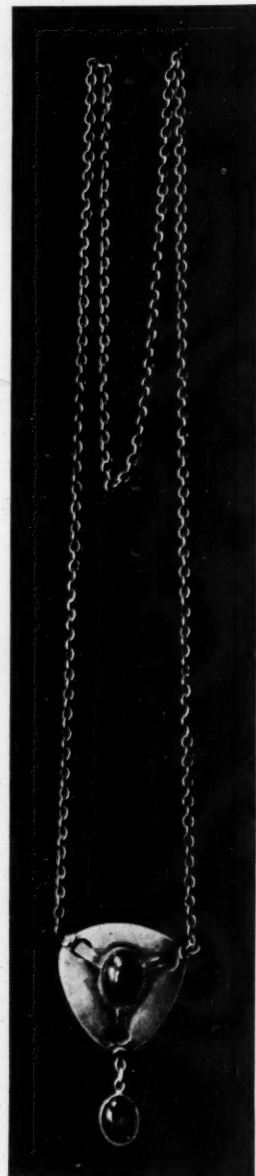
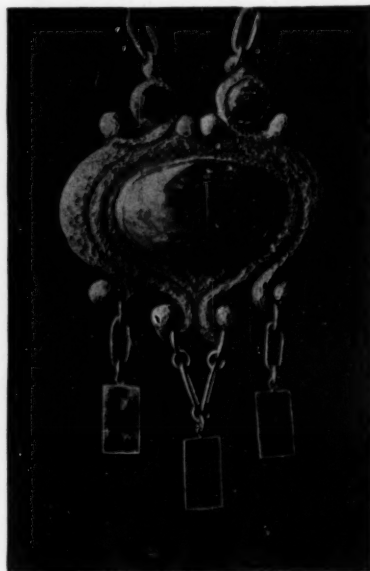
In the art department Mr. R. C. Johannot, assisted by Miss Langtry, very successfully carried out Mr. Dow's plan of work.

The sketches and illustrations done by the members of Mr. Beck's class were exceptionally good, also the work in the portrait class under the direction of Miss Ida C. Haskell.

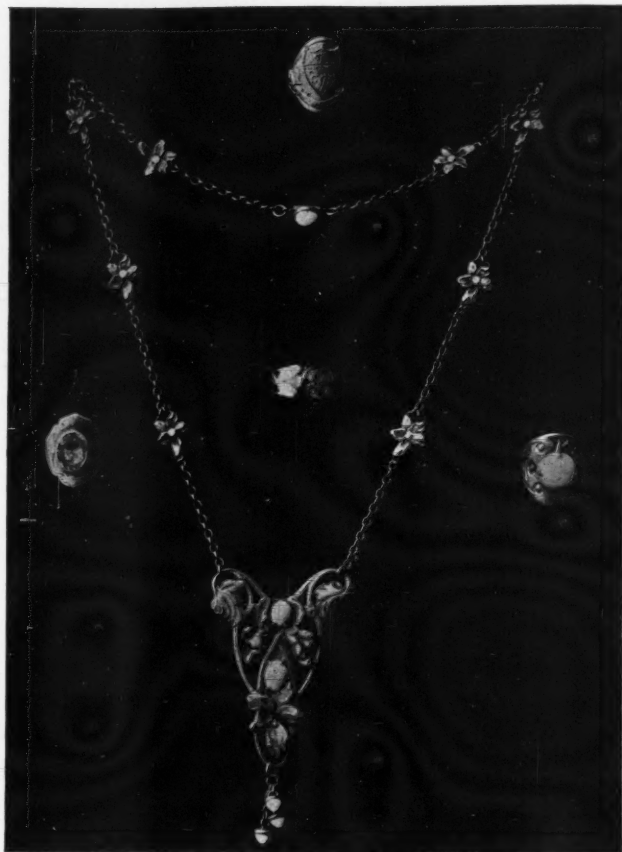
The pupils of Miss C. B. Seymour had some good work in studies of draped fabrics, and the water color under Miss Flumer and Miss Fisher showed advancement.

In the applied arts the metal work was unusually good. There was much original work especially in jewelry, the art quality as well as the excellent workmanship attracted much attention.

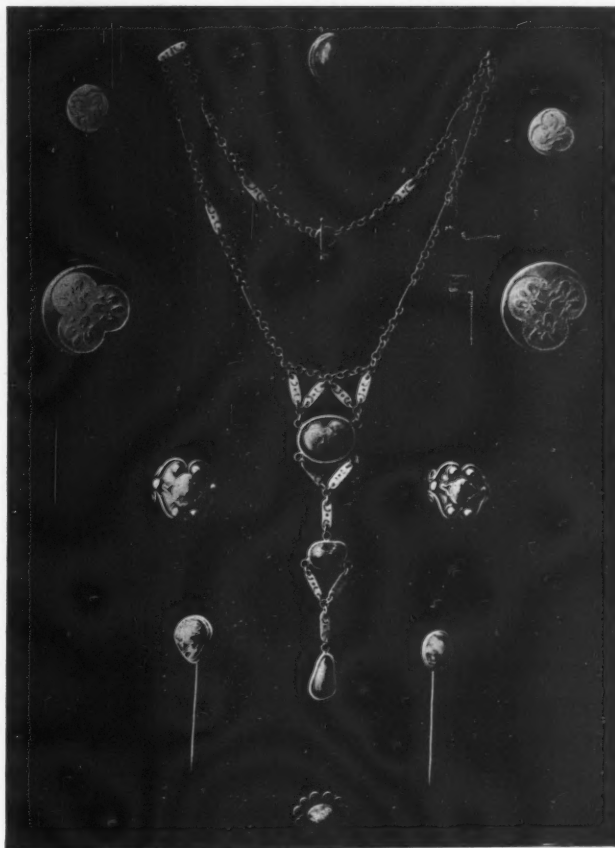
The accompanying illustrations show some of the work exhibited.



Pratt Institute.



Ellen Parker Day, Pratt Institute.



E. J. Pratt, Pratt Institute.

TREATMENT FOR VIOLETS (Page 66)

Henrietta Barclay Paist

IN the first painting of violets be very careful not to get them too purple. For any of the prepared violets a little blue is needed. In mixing a color for violets use Dresden Carmine Blue 4-5, and Ruby Purple 1-5, strengthening only the stronger portion in the second painting. For the shadowy effect use Copenhagen Blue and Gold Grey. The greens are Brown Green, Dark Green and Moss Green J., Lacroix, Fry and Mason colors, the Dark Green and Brown Green for modeling and the Moss Green for glazing in second painting. Carry out the color scheme by using Russian Green, Albert Yellow, Pompadour, Yellow Brown and Brown Green for the background colors. Beginning at the upper left hand corner with Russian Green work down in the yellow and yellow brown effect, using a little flush of Pompadour between the blue and yellow to prevent a greenish tone. Warm up the lower right hand corner as much as desired with the Yellow Brown, Pompadour and Brown Green, a touch of Yellow in the center and prominent flowers only, and a little touch of stronger violet at either side of the center. If the violets are not already purple enough in the second painting a little Rose can be flushed across the shadow side of the bunches—blending into the background. Much depends on the shadowy effects—do not bring out too many in detail.



Mr. Charles L. Pendleton of Providence, has given to the Rhode Island School of Design the art collection which he has gathered through a great many years of collecting. His collection comprises eighteenth-century English and colonial furniture, pictures, antique Chinese porcelains, Chinese china of the eighteenth-century, early eighteenth-century English pottery, antique rugs and sixteenth-century textiles.



Mary E. Peckham, Pratt Institute.



VIOLETS—HENRIETTA BARCLAY PAIST

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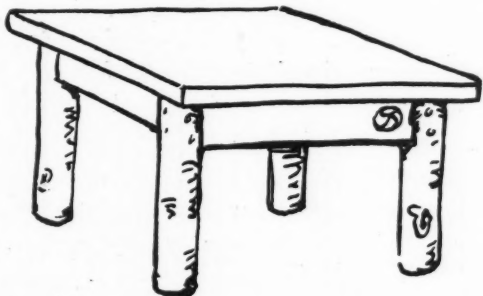
FURNITURE FOR CAMP AND COTTAGE

Elisabeth Saugstad

EACH year an increasing number of families of moderate means are realizing not only the desirability, but the possibility of having a little summer home in some unspoiled spot by the sea or in the woods; because tastes are growing simpler, and because all the talk and visible evidences of handicraft and manual training carry the conviction that the elementary uses of saw and hammer, for instance, are quite within the capacity of a person of even very ordinary intelligence and while it might not be advisable for the beginner to attempt the problems of building the shelter, yet the interior furnishing and finishing offer an opportunity for greatly reducing expense while adding much to pleasure and interest.

Of course such finish and furniture should be in harmony with the "architecture," whether it be a shack of "slab-sides," a log-cabin with rough stone chimney or a more finished cottage of shingle or stone. But even for the first instance I cannot commend the usual type of rustic furniture, shaggy barked, gnarled and knotted, with the structural members weak and no end of fussy and meaningless detail. It is neither comfortable nor practical. The rough bark is unpleasant to the touch, and eventually peels off—not altogether a disadvantage!—and when the material is cedar, as it often is, it exudes what seems a particularly sticky gum from cut ends and knots.

Wood with smooth, close clinging bark, is, of course, quite a different matter, and with the simple treatment which should be the keynote of the summer resting place, may be made most desirable and attractive. Where the beautiful white birch abounds there are delightful possibilities, but a true woods lover will not cut carelessly or wantonly. The smooth, straight young trees are the ones to choose, and in illustrations I to IV I have suggested some ways of use. The

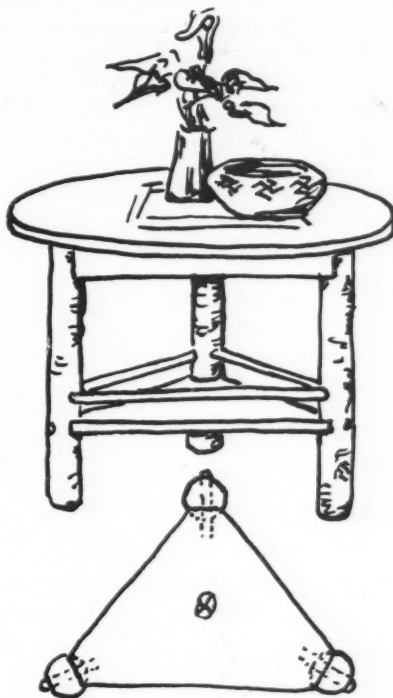


No. I

diagram in Ill. I shows the manner of construction in *a* and *b*. The legs are cut the desired height and the angle cut out to the depth of the frame, partly by the saw and the rest by the chisel; the frame may be nailed in with stout nails from the inside, or pegs may go all the way through and be glued, for though they may fit tight at first they may shrink and work

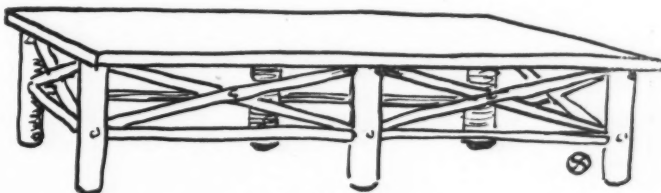
loose. Dowel wood is best for pegs if it is possible to get it, for it is difficult and tiresome to make pegs true by hand; there is no gain, and much time lost.

A table of any size may be made in the same way as the stool. For a large table for a living and dining room a good proportion is 6 feet long, 4 feet wide, and 30 inches high. The legs from 4 to 5 inches in diameter; the frame 5 inches deep and the top from 1 to 1½ inches thick. This will seat six persons very comfortably, and eight without crowding. Cross-braces would add not only to the appearance but to the stability in so large a table, but would considerably increase the difficulties of construction. Saplings 2 to 3 inches in diameter should be used, with the ends cut into tongues to fit in mortises in the legs and pegs put through at right angles. *C* in the diagram in Ill. I shows how the braces may overlap with a peg through the center.



No. II

The frame of the small round table is set in in the same way as the square, the angles, of course, being different. The shelf is set in grooves in the legs and pegged through as in the diagram. The rods above the shelf are of small, straight branches, and may be omitted.



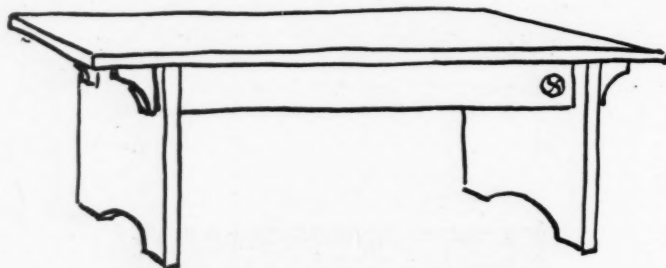
No. III

The long bench in Ill. III might be used on the porch,



No. IV

against the wall inside, or in place of chairs at the table, for chairs are difficult to make and the beginner rarely, if ever, succeeds in making one both comfortable and pleasing in appearance. The bench, as shown, is not easy to make, but it can be simplified, if desired, either by leaving out the straight braces, or by making them somewhat larger, placing them nearer the top and leaving out the cross pieces. Or a bench may be constructed like the stool, with a frame set in the stout legs.



No. V

The settle in Ill. IV would be very attractive under a long window, and with a comfortable mattress might serve as an extra bed. If longer than 6 feet a foot should be placed in the center for additional support, or two, about 18 inches from either end. The frame can be mortised in the legs, or set in an angle cut out as in Ill. I, which is easier.

The boards used in connection with these rustic pieces may be pine, spruce or hemlock, or whatever is most available; and they may be left as they come from the mill or planed, as seems most in harmony with the general finish. In either case, a stain will add wonderfully to the beauty of the result. With the delicate white birch a clear, soft leaf green, or a not very dark grey-green will be delightful. For woods with brown bark the boards may be stained brown to match, or they may be leaf green or bronze green.

Illustrations V, VI and VII are suggestions for "plank" furniture, and the variations possible are almost endless. When carefully proportioned, built and stained, it is very useful and pleasing. I would not advise the use of boards wider than 15 or 16 inches, and joining two narrow planks increases the difficulty very much. Ten to 12 inches is deep enough for the book-shelves; 12 to 14 for the bench and 15 for the washstand. There are various ways in which these pieces may be joined; the blind mortise and tenon, which is difficult and does not offer any advantage over the use of dowels, either blind or

coming through, as pegs; and the keyed mortise and tenon, which though most difficult of all, adds much to the appearance of this particular type of furniture. It is strong and practical in pieces that are not much moved about, in which case the pegs may work loose.

A set of shelves like Ill. VII, but 20 to 30 inches across the front, and with doors in the upper part and curtains below, makes a very good chiffonier to go with the washstand. In the three pieces drawn I have shown various ways of shaping the feet and brackets, and there are many more; but all curves that go across the grain would need a compass saw. Curves with the grain can be made with a stout knife or draw knife. An inverted V, more or less obtuse, can be used at the foot, and can be made with the ordinary cross-cut saw.

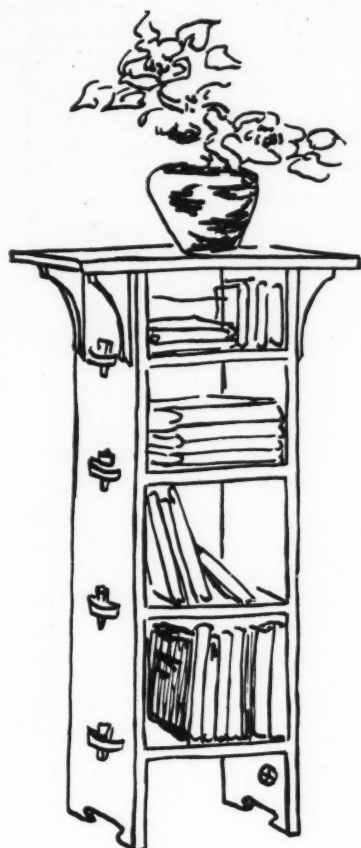


No. VI

The bed in ill. VIII is made with 4 inch squares and the frame about 1 inch thick and from 4 to 6 inches wide. It may be mortised in and pegged or it may be dowelled, or set in an angle cut out as in the stool, ill. I. A stout piece screwed or nailed diagonally across the corner will make a support for springs; or an inch square strip may be fastened at the bottom of the sides on which slats may rest. Ill IX shows two ways of making a simple couch or cot without head or foot.

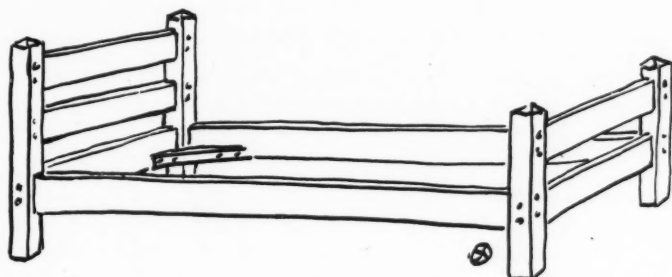
The most satisfactory way to finish this furniture is with the simple stain I have suggested. It is made by mixing ordinary painters' colors, ground in oil, and which come in small

saw would, of course, be desirable for its purpose, and a block plane for finishing end wood.



No. VII.

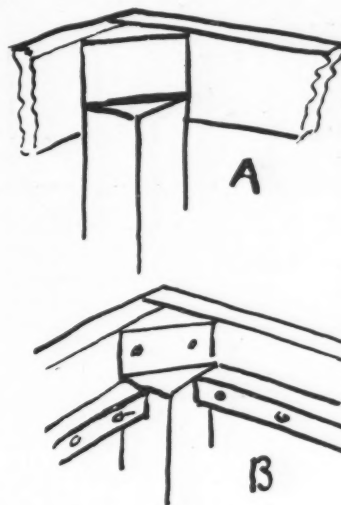
tin cans, in 3 parts of boiled linseed oil and 1 part of turpentine. Medium chrome green toned with a little black (ivory or lamp black) for leaf greens; or with Vandyke brown for various shades of bronze-greens, or with more black for grey-greens; and all the shades of the brown alone, or made warmer and richer with a little burnt sienna, are all the colors needed or that are safe, satisfactory and artistic in the hands of beginners. Paint is satisfactory on this "plank" furniture when it has been



No. VIII.

well planed and smoothed with sandpaper. The best colors are ivory white, and many greens—apple green, leaf green, sage green, bronze green and hunter's green—a few shades of red; but no browns are good for this purpose in paint.

An elaborate outfit of tools is not necessary. It is wonderful how much can be done with a medium sized cross-cut saw and a hammer. Add to these a half-inch chisel, a $\frac{3}{4}$ bit, a jack-plane, a compass saw for curves, a draw-knife, or good, stout knife (a Sloyd knife, for instance), a try-square and ruler, and an ingenious person ought to be pretty well equipped. A rip



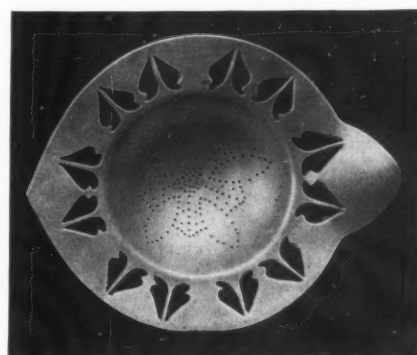
No. IX.

MAKING A SILVER TEA STRAINER

Emily F. Peacock

A real tea strainer can truly be a thing of beauty and a joy forever. In this problem, so many different ideas in size and shape can be carried out. One of the chief points though is to make the holes in the strainer just large enough for the tea to run through easily; if there is a handle, to have it long enough, and if the strainer is to rest on the top of a cup, to have the rim large enough without seeming clumsy.

Materials for the large tea strainer; a piece of silver $5\frac{1}{4} \times 4\frac{1}{4}$, 22 gauge.



TOOLS REQUIRED

Saw frame, metal saws, size 01, hand or lathe drill, drills, steel compass, steel point, vise and pattern block made from a 4 inch cube of hard wood carved slightly concave on one side as in profile (Fig. 1), files and emery cloth.

METHOD

Make a circle $2\frac{1}{4}$ inches in diameter in the center of the silver with the steel compass, inside this circle make several concentric ones as in Fig. 2, cut or saw the silver along the outside line, and smooth the edge with a file. Put the pattern block firmly in the vise, concave side uppermost, place the silver on this, and begin to hammer it into the hollow, just outside the circle. Make close even strokes and work spirally to the center. Continue this process until the strainer is deep enough, about

one inch in the center, not forgetting to anneal the silver whenever it sounds hard. If the rim of tea strainer should buckle, straighten it with a wood hammer. The design on the

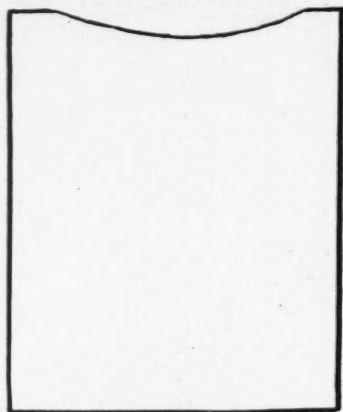


Fig. 1

rim can either be pierced, etched, or repoussed, in any case it must be put on first with a steel point. If it is pierced, a hole must be drilled for the saw wherever there is to be a space, and

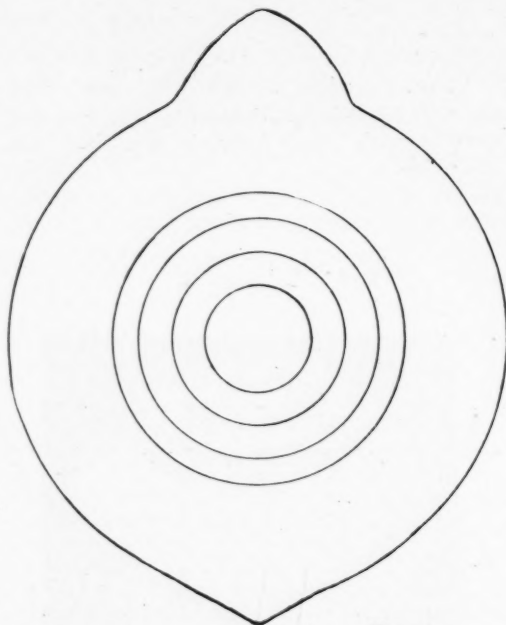


Fig. 2.

the design carefully sawed out. All the edges should be made smooth with a small half round finishing file, and the handle part slightly repoussed from the back.



Fig. 3.

The last step is to drill the holes for the strainer, find the center of this, and make several circles for a guide. A pattern can be made in the strainer, or simply circles of holes. Before

drilling always start the hole with a steel punch, so that the drill will not slip.

The smaller tea strainer by Miss E. J. Pratt is very attractive, and simpler to make, not having a rim to deal with. It is started in the same way as the large one, and finished by hammering over a steel ball the right size. The side pieces are pierced and soldered on.

A frame of silver wire combining the handle and rest, soldered on a shape of this kind, as in Fig. 3, gives a quaint finish to a tea strainer.



MATERIALS USED

A piece of silver 2 inches square, 22 gauge, also a strip $1\frac{1}{2} \times 2$, 24 gauge for the side pieces, and about 10 inches of silver wire, gauge 18.

Tools, as given before and added, round nose pliers to adjust the wire, a steel ball, a round faced hammer. For the soldering, a piece of charcoal, solder and flux, either borax or amberine.

ANSWERS TO INQUIRIES

C. K.—To clean jewelry that has no chased work, jewelers moisten the surface with a brush like that in a mucilage bottle dipped in alcohol that has a few drops of ammonia for every half pint of alcohol. Then with another brush they apply a little finely powdered whiting and polish off with a jeweler's brush. When the jewelry is chased or set with real gems the powder is washed off with soap and water and the articles are dried by putting them into fine sawdust. Stones that are in a closed setting must not be washed.

Basketry—Coiled basketry is a type of basket work in which a foundation of hard or soft material, arranged in a spiral, is held together by means of over and over sewing.

Imbricated ornament, is coiled basketry in which a strip of soft material is folded back and forth, over the stitches, over-lapping like shingles on a roof or the folds in knife plaiting. Klikitat and Fraser River basketry are imbricated.

In the coiled basket bowls of the Coahvilla Indians of Southern California, the cleaned fibre from the leaves of the Agave deserti is used to form the first few turns of the coil, which is then continued with grass stems.

Miss L. S.—Velour especially made for stencil work and burning comes in twenty seven and fifty inch widths, with a plain linen back. It ranges in price from twenty-five cents a yard up.

E. Allen—Carbon paper comes by the sheet and in several colors, white or light yellow is best for use on dark surfaces. It should always be kept from the air, exposure renders it useless.

Mrs. T. R.—A hard typewriter's eraser is a good thing to keep your platinum point clean, if the point is clean and hot, there should not be any trouble with the etching.

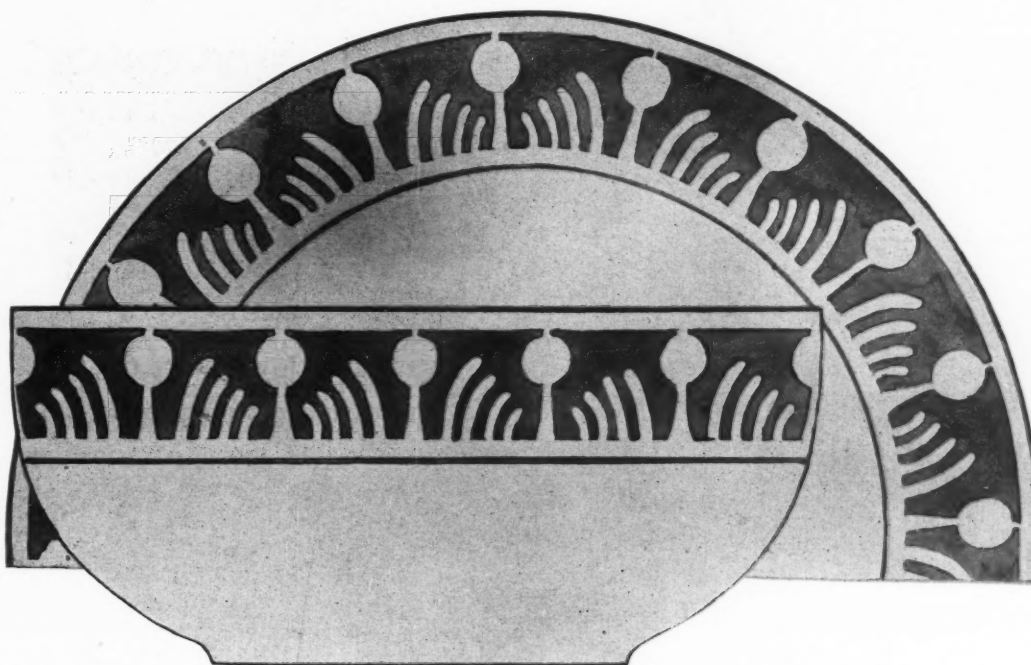
Basketry—Some aniline dyes can be used successfully in basketry. Always use the mordant properly, and after the material is dyed wash it in strong soapsuds to take out any color likely to fade. In the Diamond dyes the black is good as it is. The orange is very strong. Light red can be made more scarlet by adding scarlet, and darker by adding a little black. Bright green can be made bluer by adding blue, greyer by adding a little red, and

darker by adding black. With experience you will get interesting results.

Candlestick—The bayberry dips are about eight inches long, tapering from about one inch diameter at the bottom to about three-eighths of an inch at the burning end. The color is a peculiar green, nearer olive than anything else. You can buy them from the Jarvie Shop, 608 W. Congress Street,

Chicago, Ill. The price is a dollar and seventy-five cents a dozen, or fifteen cents each; carriage charges extra.

Mrs. J. R.—A fusing alkali might do to flux the platinum, but alkaline carbonates do not act on it. Platinum would need extremely high heat to fuse. It could be polished with *very* fine pumice and water, or whiting.



BOWL AND PLATE EXECUTED IN GREY BLUE—EMILY F. PEACOCK

ANSWERS TO CORRESPONDENTS.

This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.

All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.

Mrs. A. G. A.—You will find in another answer the directions for mixing powder and tube colors for painting. For tinting, after having mixed powder color to the consistency of stiff tube color with the medium, add about an equal amount of fat oil, thin with oil of lavender to the desired shade.

A. G. C.—I do not know of any flux for gold excepting that given in recipe for making gold. One part pulverized borax, to twelve parts nitrate of bismuth. Copper is never used in the proper preparation of gold, the least trace of it would spoil the beautiful color the gold should be.

R. J.—Some greens are liable to turn brownish in spots, notably, Coalport and other greens of that shade, especially on Belleek. We can suggest nothing except to dust black over it. That fault is almost irremediable, although we have occasionally heard of it coming out all right in a second fire. We have known of several boxes of gold of the make you mention which dried so hard it could not be used, the oils used in its manufacture are inferior. We would suggest dissolving it off the glass with alcohol, then pour off the liquid when settled and when dry, mix freshly with a *very* little fat oil and thin with turpentine. An iron kiln should be kept well white-washed with the ordinary slaked lime, it prevents the iron affecting the color.

L. C. K.—If pink, rose, carmine or any one of the gold colors is underfired, it will come out unglazed and a brick red color and rub off, especially if put on too thick, on a piece where some of the pink glazes and some does not, the unglazed spots are more heavily painted than the others. Gold colors need a good average fire—some other colors, such as greens, may glaze in the same or a lighter fire. The pink in your case was either underfired or too heavily painted.

M. B.—For painting with powder colors, we mix with the medium usually sold with the colors and thin with turpentine. A good medium is made of 6 drops oil of copaiba to one of oil of cloves. For tube colors we thin with spirits of turpentine or oil of lavender. For tinting we use fat oil of turpentine and oil of lavender—you will find this method explained several times in back numbers of *KERAMIC STUDIO* answers to correspondents. The directions for mixing enamels, raised paste and gold are given also a number of times, and as you have been a subscriber three years you will find much valuable instruction in looking over your old file. The reason your white enamel ran into your green background was either because you used a soft enamel when you should use a hard white enamel, such as Aufsetzweis, or you did not put on enough enamel to resist the color, or your color was so deep as to absorb the enamel.

L. S. C.—The so-called "Royal Worcester" tint is a creamy matt finish, which was much used at one time in the Royal Worcester factory; it can be procured from any dealer in colors for ceramic decoration under the name of matt ivory or Royal Worcester tint.

Mrs. M. F.—Light sky blue is the palest tint of blue made. There are a number of dark blues. The depth of color, however, depends a good deal on how it is put on. Any blue will make a light tint by thinning with oil of lavender or spirits of turpentine, or your regular tinting mixture; and every dark blue will have to be put on twice or dusted heavily to show its richest depth of color. Aztec blue is a rich deep blue; Royal blue and Banding blue with Black, also make a dark color. Gold will come out fairly good over fired color if the latter is not too heavily put on, but is always richest on the white china.

If you use your monogram in the center of your plates, they should also be in center of saucers, but we would prefer a monogram on the rim, as it receives less wear and always shows, while the center of plate or cup is soiled almost immediately when in use.



CHERRIES—LOUISE M. SMITH

FIRST fire, Fruit—Use Yellow Red, shading with Pompadour and Blood Red with Albert Yellow, and Yellow Brown for reflected lights. For darker cherries add a touch of Ruby to the Blood Red. Model carefully, keeping some of the fruit rather flat, as they appear back of the more prominent ones.

Keep the leaves warm in tone, adding some Blood and Ruby where they melt into the darker effects of the background.

Second Fire—Retouch with same colors, adding Blood Red to the two purple shadows, and snaps to the stems.

Third fire consists in washes to harmonize the whole.

THE BOOK OF ROSES



*Studies for the China Painter and
the Student of Water Colors*



It contains over forty pages of designs and studies, many of which have appeared in back numbers of *Keramic Studio* now out of print, and the volume is also enriched by nine color studies by the following artists: Marshal Fry, F. B. Aulich, Sara Wood-Safford, E. Louise Jenkins, Anna B. Leonard, Rhoda Holmes Nicholls and Teana McLennan Hinman.

Among the other contributors to the book we have K. E. Cherry, Mary Alta Morris, Henrietta B. Paist, Hattie V. Young Palmer, Ida C. Failing, Marianna Heath, A. A. Robineau, Sara B. Vilas, M. M. Mason, I. M. Ferris, Nellie Sheldon, F. G. Wilson, Alyce Barber Pflager, Mariam L. Candler, Mary Alley Neal, E. Mason.

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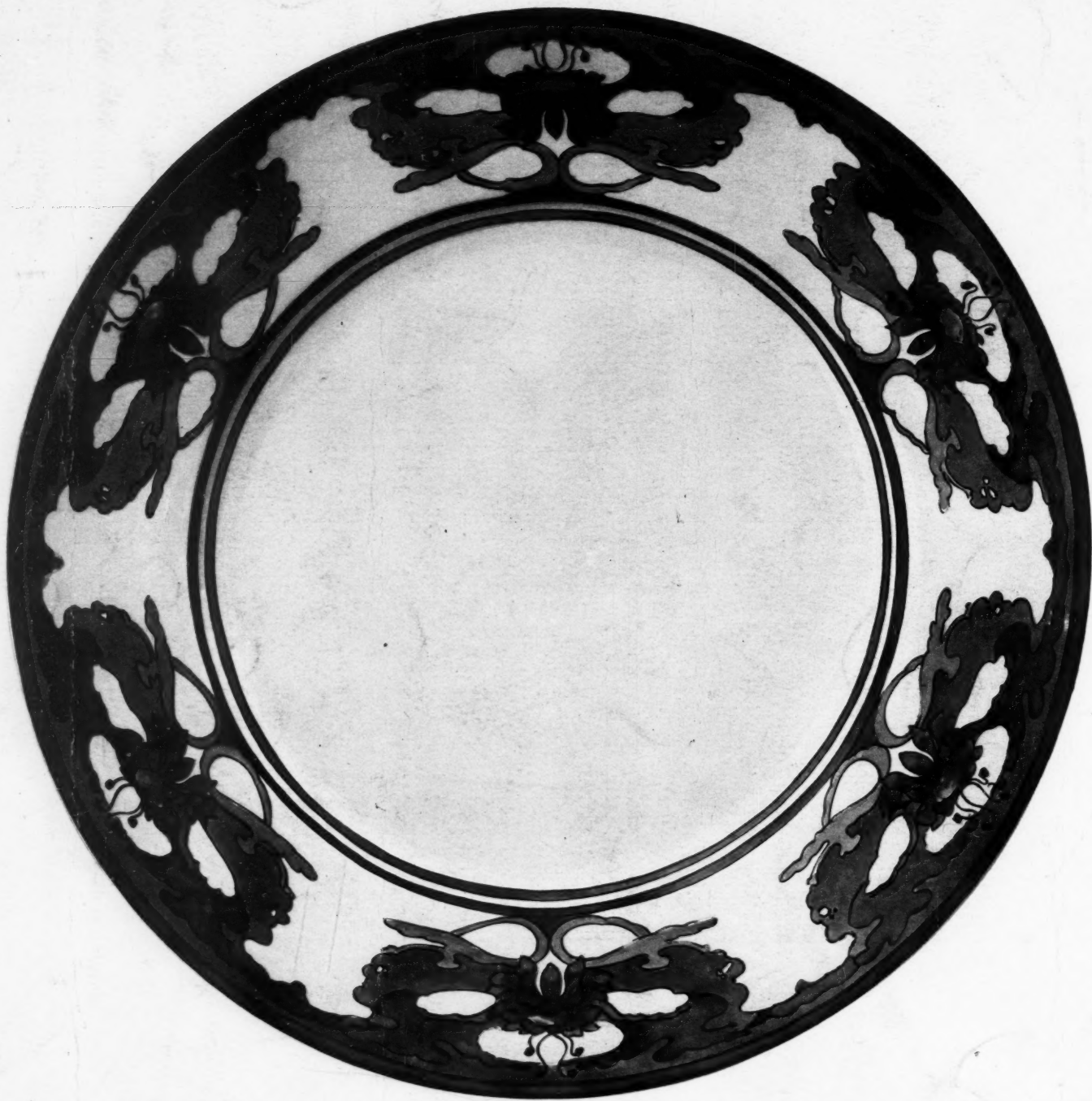
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PLATE—MARIE CRILLEY WILSON

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KERAMIC STUDIO

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